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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,382	11/25/2003	Gon Kim	K-0564	4277
34610	7590	09/22/2006	EXAMINER	
FLESHNER & KIM, LLP			RIGGLEMAN, JASON PAUL	
P.O. BOX 221200			ART UNIT	
CHANTILLY, VA 20153			PAPER NUMBER	

1746

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/720,382

Applicant(s)

KIM ET AL.

Examiner

Jason P. Riggelman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/25/2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because none of the number labels of the parts, for the drum-type washing machine depicted in Figure 1, correspond to those described in Lines 11-24 of the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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2. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Specification

3. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

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The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The length of the abstract for application 10/720,382 is less than the 50-word minimum specified above.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "each separate washing condition according to a temperature of water" in claim 1 is a relative term which renders the claim indefinite. The term "washing condition" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear as to what entails a washing condition, what water temperature is being measured – in the tub or supply hoses, and what separate washing conditions comprise.

7. Regarding claim 2, the phrase "a laundry amount" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). For instance, an amount could be a volume or a mass.

8. Regarding claim 5, the phrase "in direct" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). It is unclear if this is a typo or other problem.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Cho (US Patent No. 6044510).

11. Cho teaches a method (Column 5, Lines 24-29 and Column 6, Lines 0-2) of controlling a drum type washing machine whereby a sensor measures the temperature of the washing water and a microprocessor performs individual subroutines, with each of the subroutines corresponding to the respective temperature of the washing water.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 2 is rejected under 35 U.S.C. 103(a) as obvious over Cho (US Patent No. 6044510), as described in claim 1 rejection, and in view of Harwood (US Patent No. 5768728).

12. Cho does not teach a means for sensing a load size; however, Harwood discloses such a method. Harwood teaches a process (Column 2, Lines 47-67 and Column 3, Lines 0-2) whereby a laundry washing machine automatically determines a suitable level of water for any given load size. It would be obvious to one of ordinary skill in the art to modify the laundry machine process of Cho with one which automatically determines a suitable level of water for any given load size thereby providing the additional benefit of making an energy efficient automatic drum-type washing machine as taught by Harwood.

13. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho (US Patent No. 6044510) and Harwood (US Patent No. 5768728), as applied to claim 2

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above, and further in view of Rhodes (US Patent No. 6499321) and Knopp (US Patent No. 6425156).

14. In regards to claim 3, Cho and Harwood do not teach the use of a washing condition set up in a look-up table; however, Rhodes and Knopp both disclose such a method. Rhodes teaches (Column 4, Lines 4-11) the use of a look-up table, with which it associates specific measured water temperatures to various water temperature ranges, for a horizontal axis type machine laundry machine (Column 1, Lines 11-12). Another example of prior art is Knopp (US Patent No. 6425156) which teaches, (Column 3, Lines 27-39 and Column 2, Lines 57-63) stored programs which allow the user to recall saved parameters such as water level in a tub, temperature of washing liquid, a drum speed, or a timing and a duration for particular processing steps during the operating program cycle. It would be obvious to one of ordinary skill in the art to modify Cho and Harwood, as described in claim 2 rejection, with a look-up table to create a more efficient control for the automatic washing machine.

15. In regards to claim 4, Cho and Harwood do not teach the method of washing on different conditions by determining if the temperature of washing water is in a predetermined range; however, Rhodes discloses such a method as described in paragraph 14 above. It would be obvious to one of ordinary skill in the art to modify Cho and Harwood, as described in claim 2 rejection, to control the washing conditions depending on the water temperature range to create a more energy efficient automatic washing machine.

16. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cho (US Patent No. 6044510), and further in view of Herr (US Patent Publication No. US 2003/0034507), and Harwood (US Patent No. 5768728).

17. Cho does not teach the use of selecting an automatic mode or manual mode and then sensing a load size. Herr teaches (Paragraph [0010], Line 2-4) the use of an "auto start" feature which can be selectively turned OFF or ON which allows the user to selectively operate the instrument in manual or automatic modes. Herr does not teach the method of determining a load size; however, Harwood teaches (Column 2, Lines 47-67 and Column 3, Lines 0-2) a method whereby a washing machine automatically determines a suitable level of water for any given load size. It would be obvious to one of ordinary skill in the art to modify Cho with an automatic and manual mode feature, as well as with an automatic load size sensor, to create a more user-friendly yet energy efficient automatic washing machine.

18. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cho (US Patent No. 6044510), and Herr (US Patent Publication No. US 2003/0034507), and Harwood (US Patent No. 5768728) as applied to claim 5, and further in view of Rhodes (US Patent No. 6499321). Rhodes teaches (paragraph 15 above) the use of a look-up table whereby a measured water temperature is associated with a hot or cold determination. It would be obvious to one of ordinary skill in the art to modify Cho and Harwood and Herr, as described in claim 5 rejection, to control the washing conditions depending on the water temperature range to create a more energy efficient automatic washing machine.

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19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure Tanaka (US Patent No. 5133200). Tanaka discloses a method for a washing machine that washes a load in accordance with feed water temperature – without further modification.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P. Riggleman whose telephone number is 571-272-5935. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


MICHAEL BARR
SUPERVISORY PATENT EXAMINER

Jason P Riggleman
Examiner
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